

Galileo Galilei

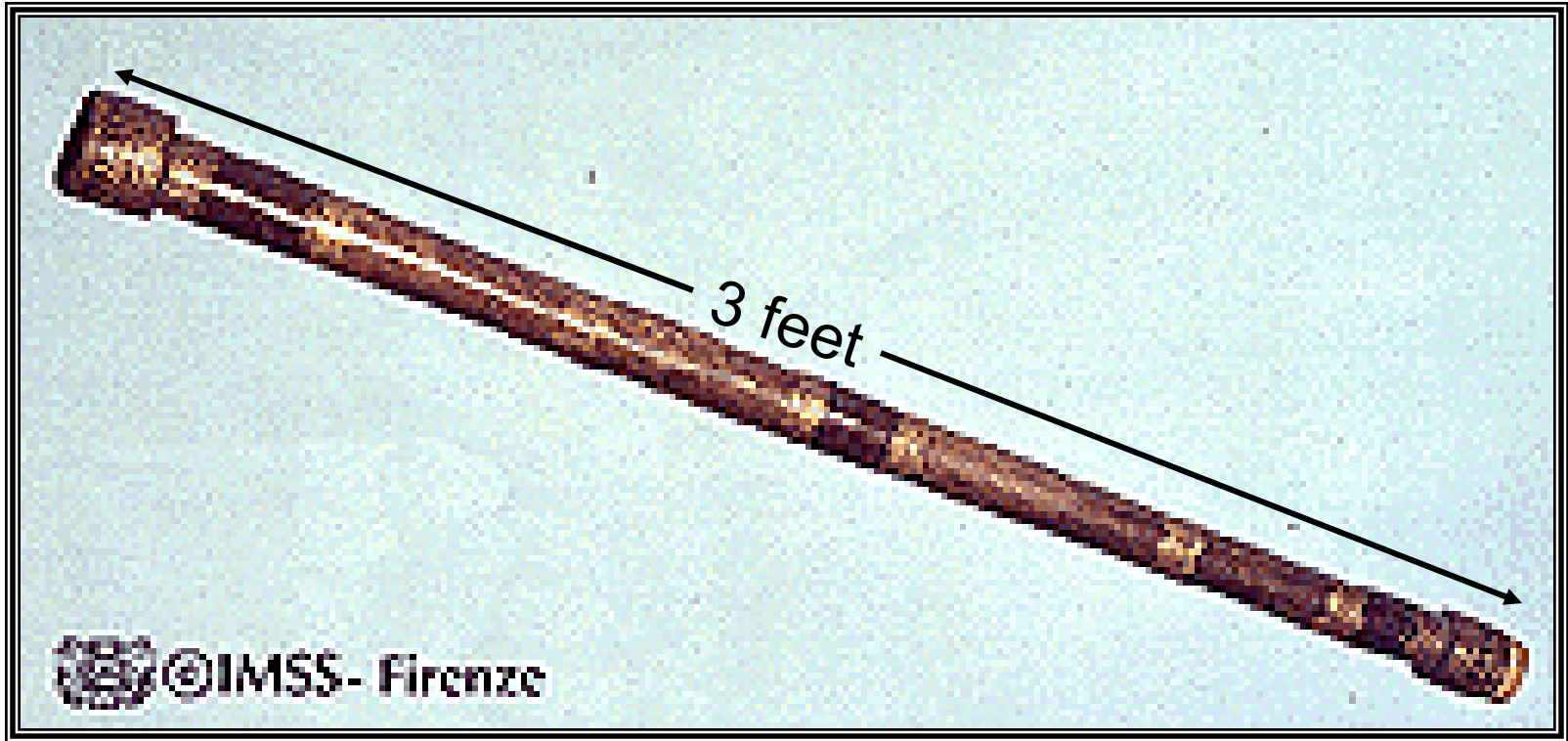
1564 – 1642

by

Justus Sustermans

Palazzo Pitti

Firenze



Museo di Storia della Scienza, Firenze

**Wooden tube covered with red leather decorated in gold
21 X magnification
16mm objective lens**



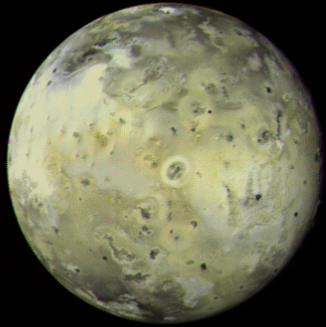
Museo di Storia della Scienza



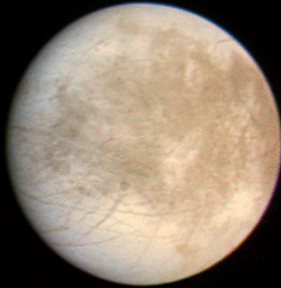
The Power of 3!

1. Spots on the Sun
2. Mountains on the moon
3. Phases of Venus
4. Rings of Saturn
5. Stars are distant
6. Stars invisible to the naked eye
7. Milky way made of stars
8. Moons of Jupiter

Four of Jupiter's 61 moons



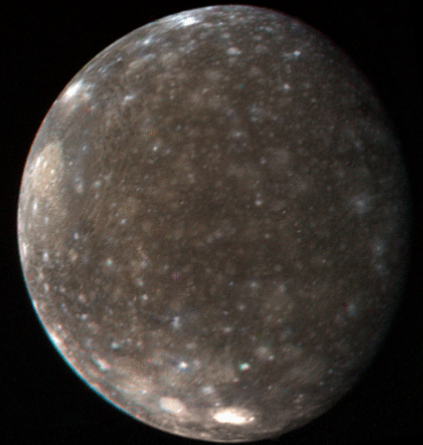
Io



Europa

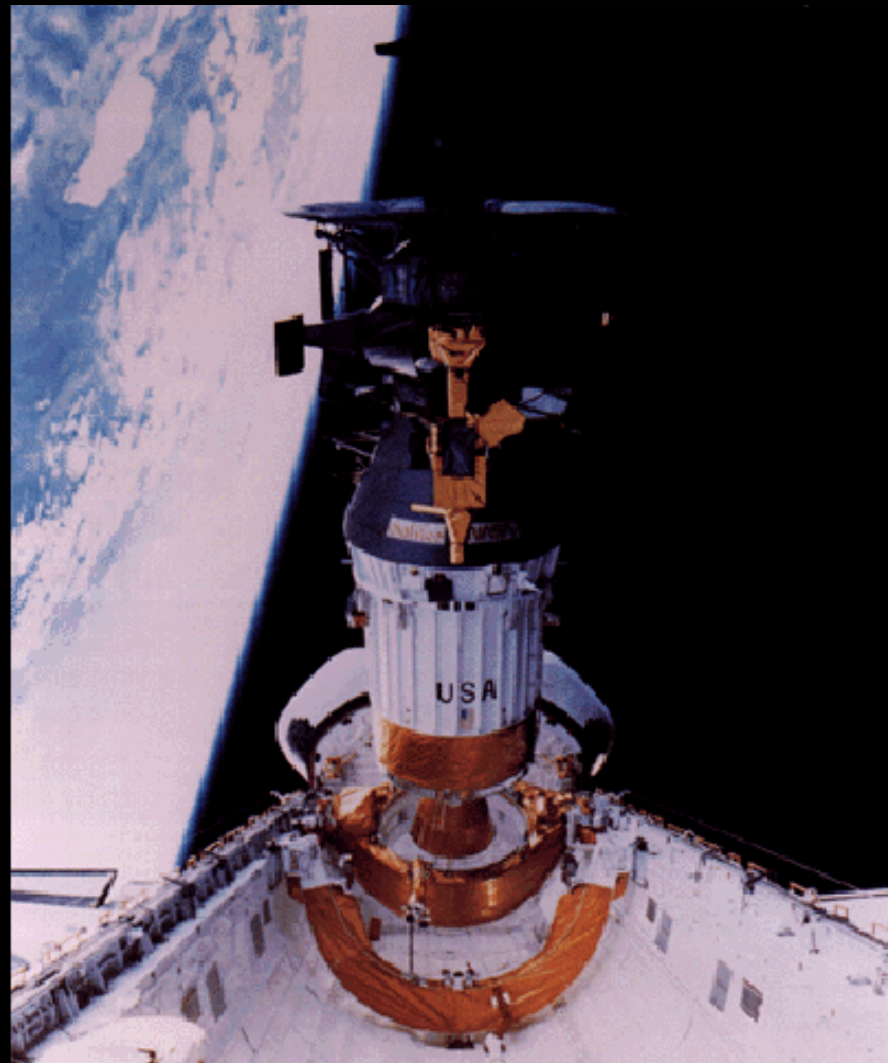
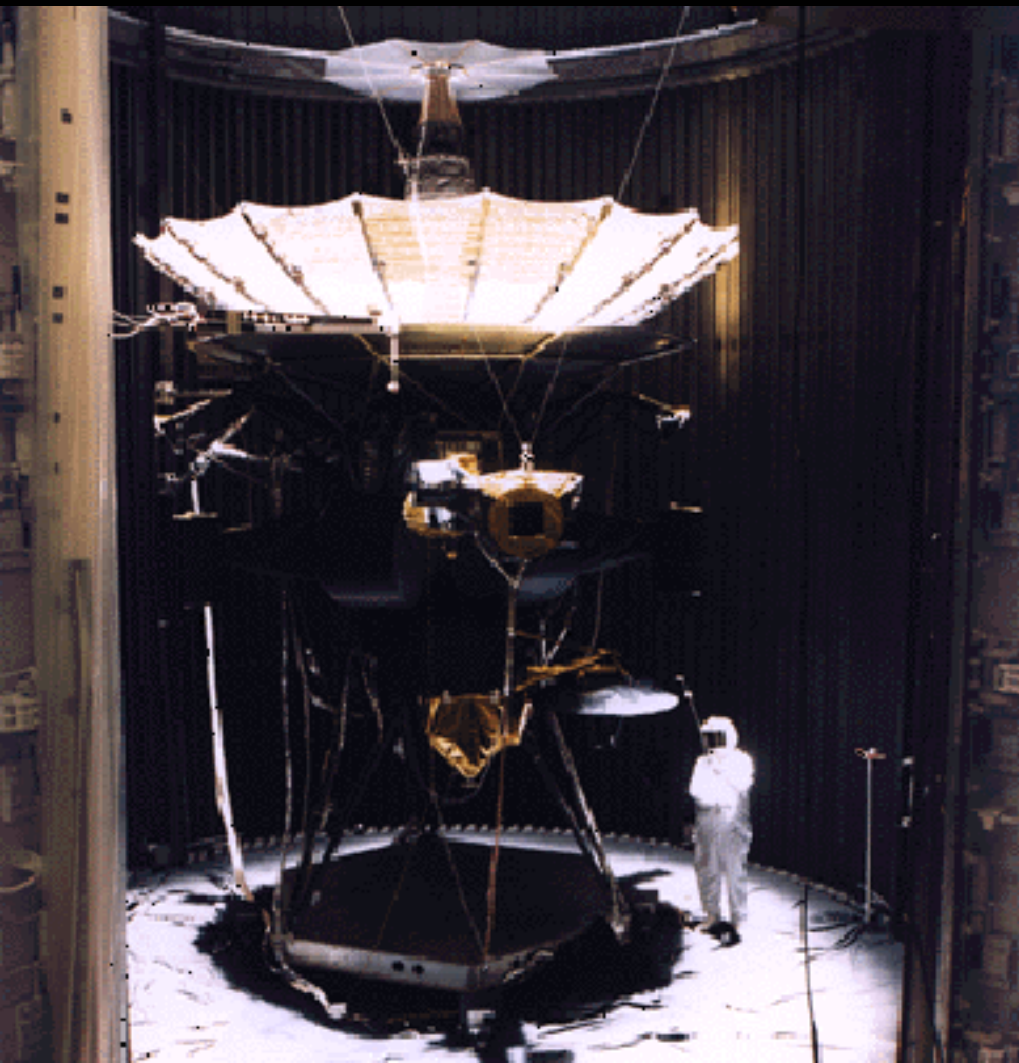


Ganymede



Callisto

Galileo

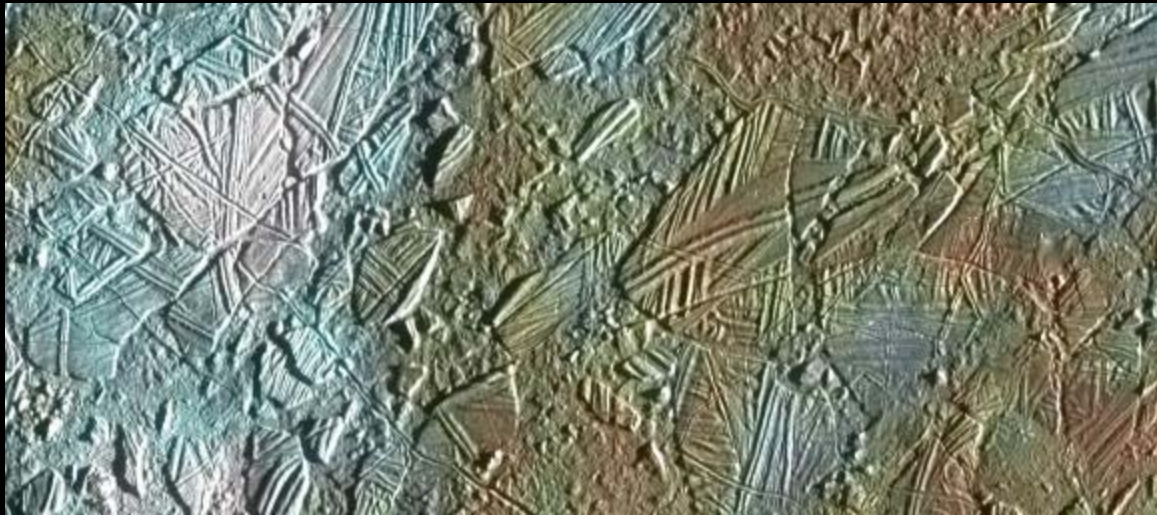
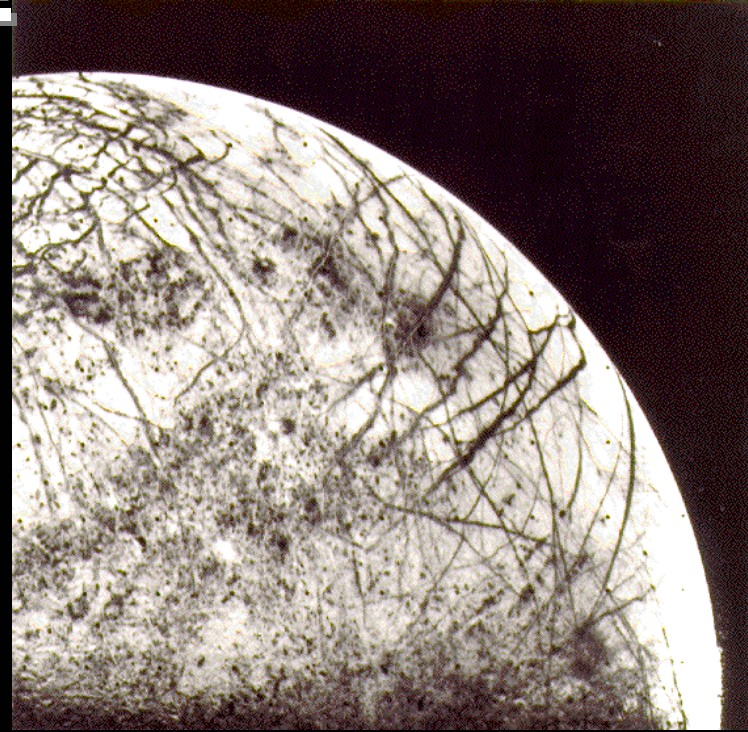
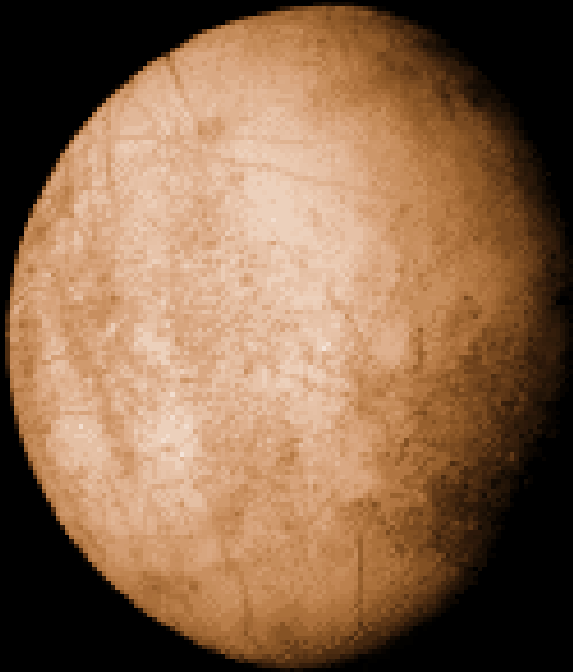


launched 1989

arrived at Jupiter 1995

plunged into Jupiter 2003

Europa



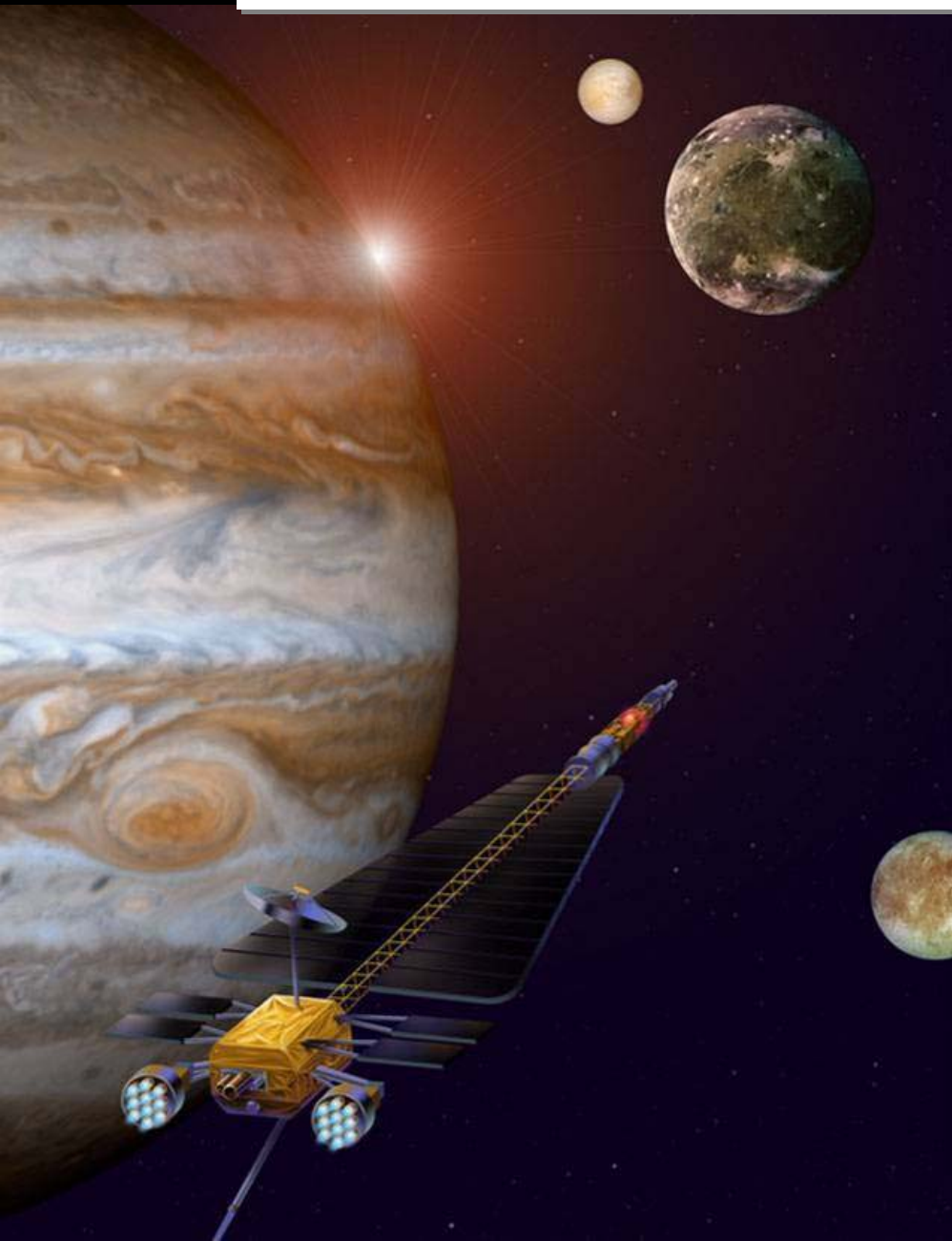


OCEAN
PLANET
SMITHSONIAN



Giant tube worms
at undersea
hydrothermal vents

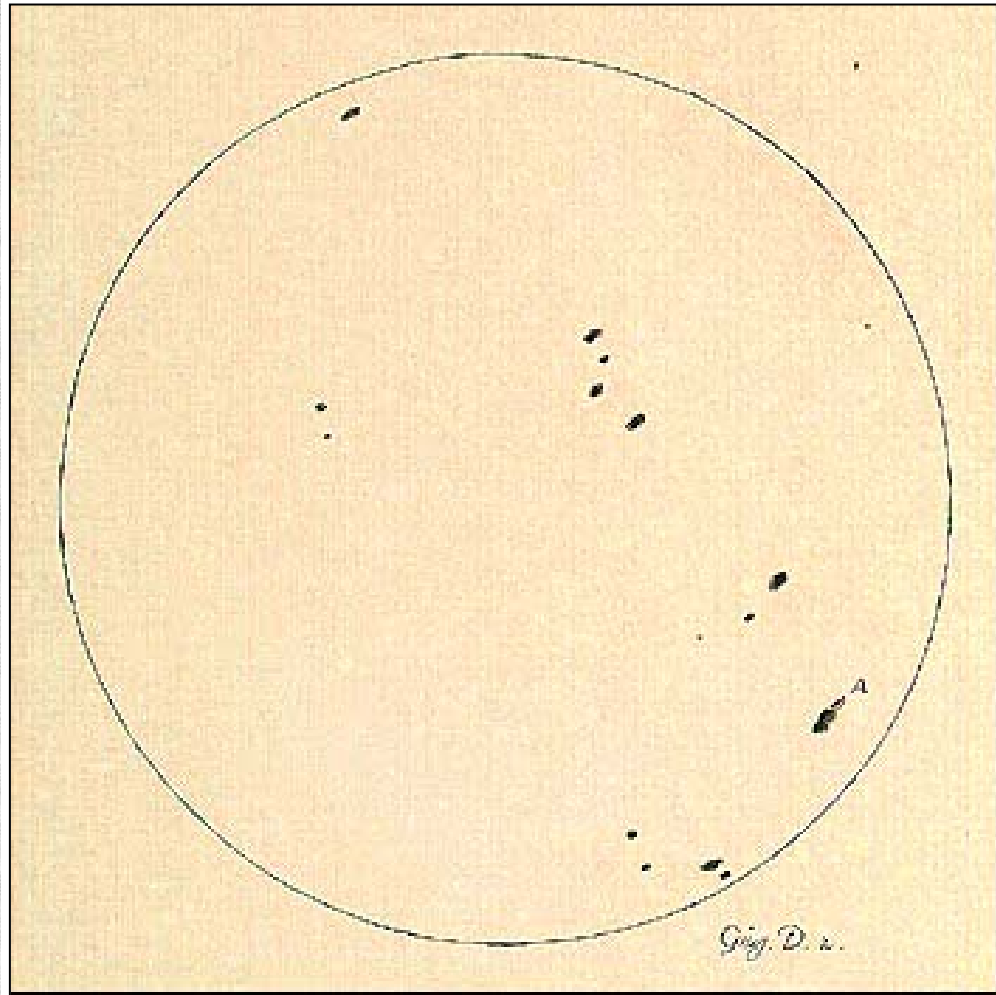
Jupiter Icy Moons Orbiter



ISTORIA
E DIMOSTRAZIONI
INTORNO ALLE MACCHIE SOLARI
E LORO ACCIDENTI
COMPRESSE IN TRE LETTERE SCRITTE
ALL'ILLVSTRISSIMO SIGNOR
MARCO VELSERI LINCEO
DVVM VIRO D'AVGVSTA
CONSIGLIERO DI SVA MAESTA CESAREA
DAL SIGNOR
GALILEO GALILEI LINCEO
*Nobil Fiorentino, Filosofo, e Matematico Primario del Sereniss.
D. COSIMO II. GRAN DVCA DI TOSCAN A.*

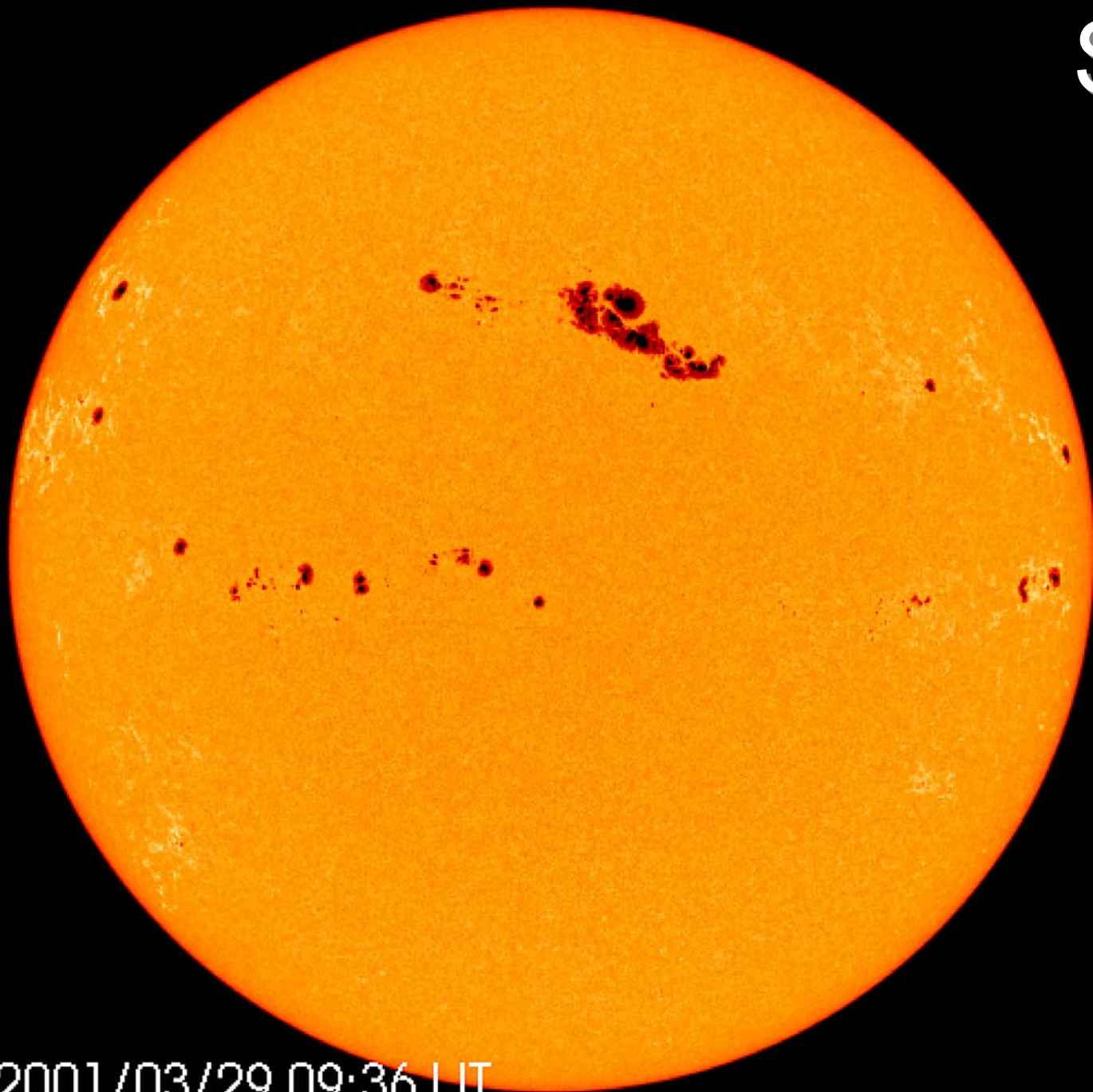


IN ROMA, Appresso Giacomo Mascardi. MDCXIII.
CON LICENZA DE' SUPERIORI.



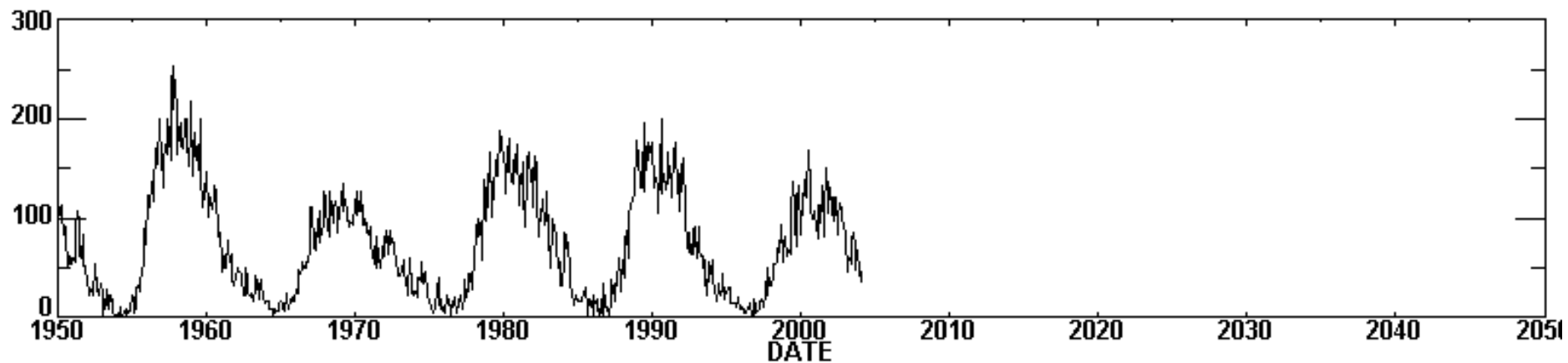
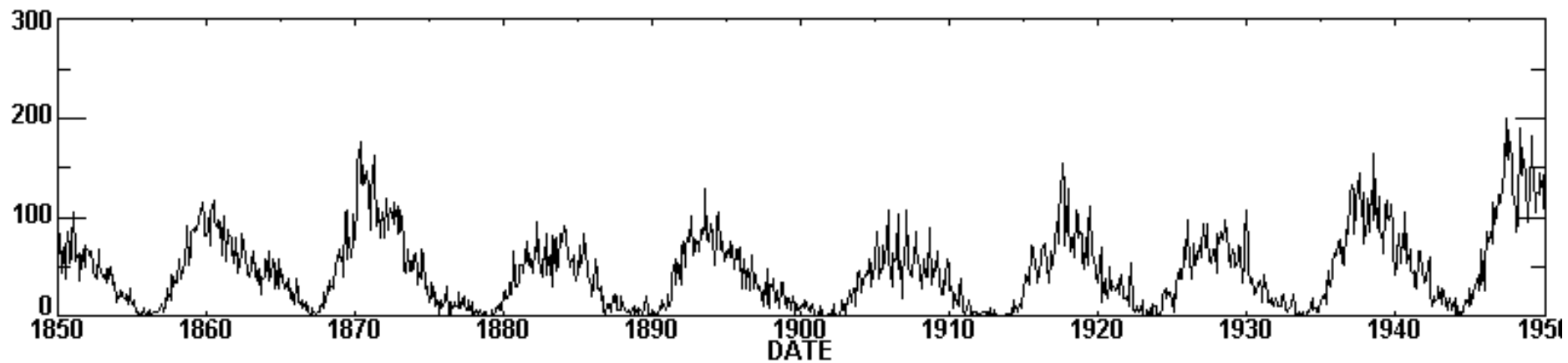
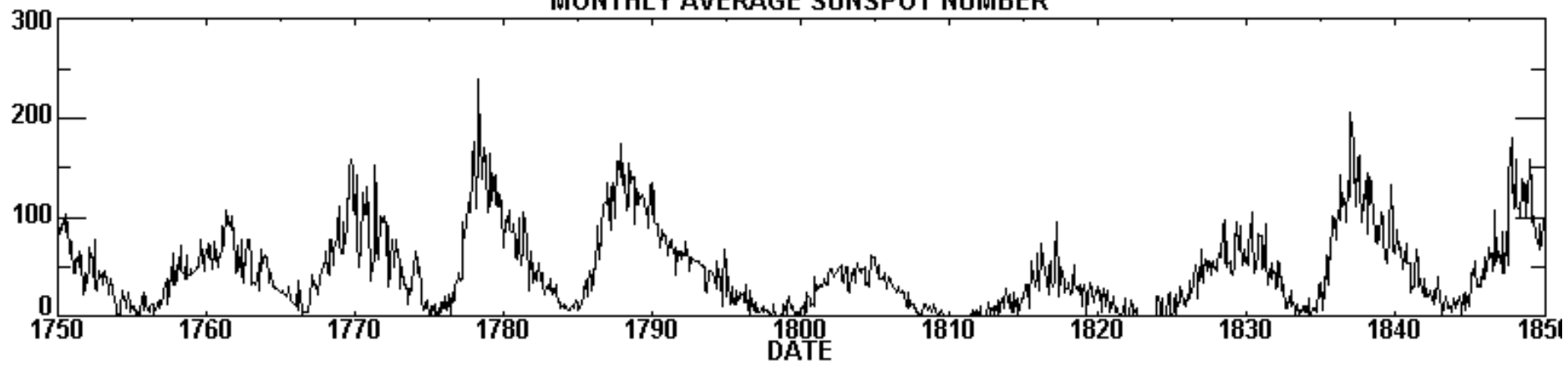
36 images in summer 1613

Sunspots



2001/03/29 09:36 UT

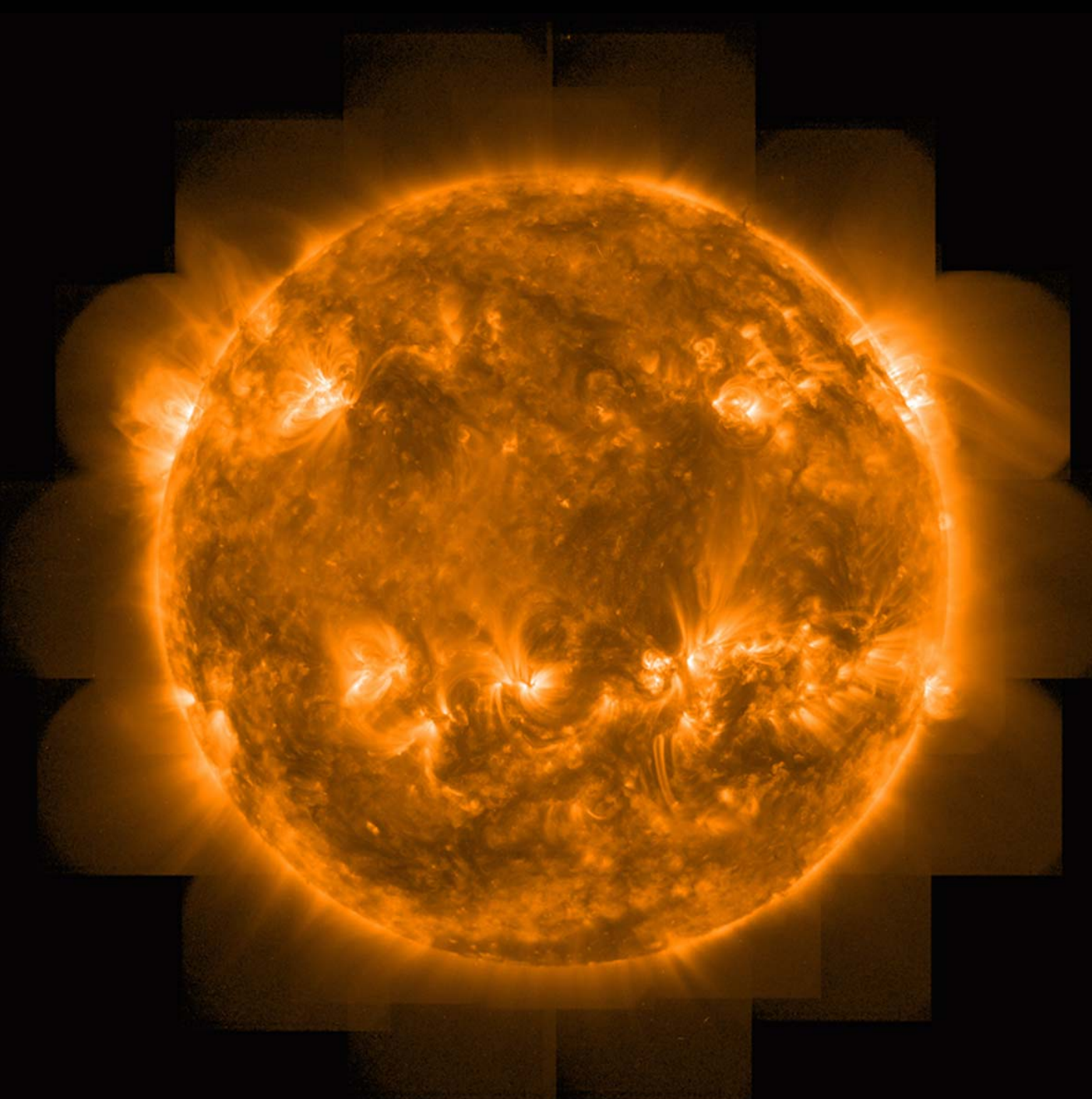
MONTHLY AVERAGE SUNSPOT NUMBER



MDI 7-Apr-2004



Ultraviolet Light



TRACE (UV)

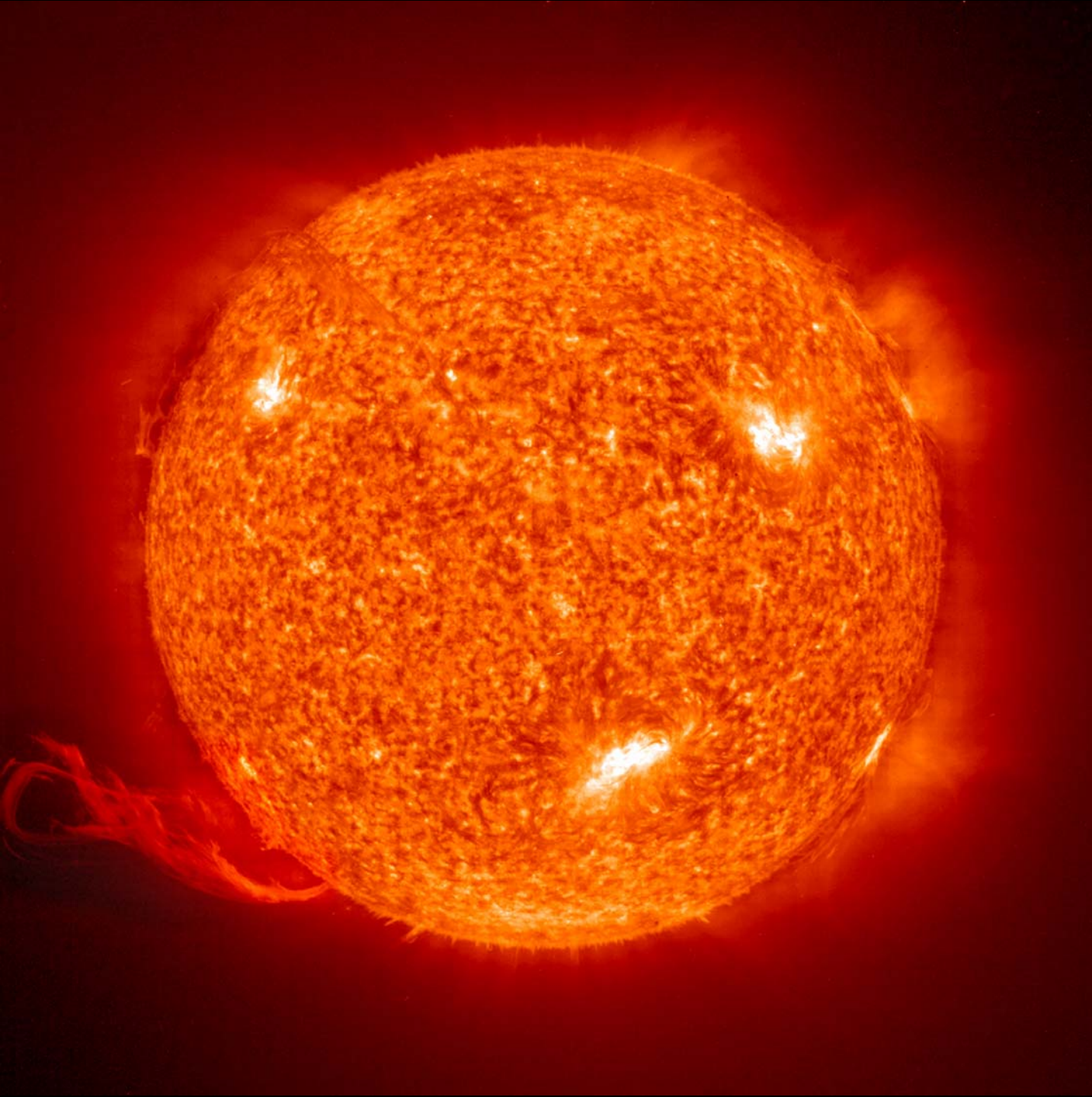


Solar Storms

Approximate
Size of Earth



SOHO (UV)



Sun Websites with Pictures & Movies

<http://cse.ssl.berkeley.edu/>

<http://sohowww.nascom.nasa.gov/>

<http://sunland.gsfc.nasa.gov/smex/trace/>

http://es.rice.edu/ES/humsoc/Galileo/Things/g_sunspots.html

S I D E R E V S N V N C I V S

MAGNA, LONGEQVE ADMIRABILIA
Spectacula pandens, suspiciendaque proponens
vnicuique, præsertim verò

PHILOSOPHIS, atq; ASTRONOMIS, quæ à
G A L I L E O G A L I L E O
P A T R I T I O F L O R E N T I N O

Patauini Gymnasij Publico Mathematico

P E R S P I C I L L I

*Nuper à se reperti beneficio sunt observata in LUNÆ FACIE, FIXIS IN-
NUMERIS, LACTEO CIRCULO, STELLIS NEBULOSIS,*

Apprime verò in

Q V A T V O R P L A N E T I S

Circa IOVIS Stellam disparibus intervalis, atque periodis, celeritate mirabili circumvolutis; quos, nemini in hanc usque diem cognitos, nouissimè Author depræhendit primus; atque

M E D I C E A S I D E R A
N V N C V P A N D O S D E C R E V I T.



VENETIIS, Apud Thomam Baglionum. M D C X.

Superiorum Permissu, & Privilegio.

SIDEREAL MESSENGER

**unfolding great and very wonderful sights
and displaying to the gaze of everyone,
but especially philosophers and astronomers,
the things that were observed by**

GALILEO GALILEI,

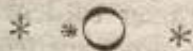
Florentine patrician

**and public mathematician of the University of Padua, with the help
of a**

**spyglass lately devised by him,
about the face of the Moon, countless fixed stars,
the Milky Way, nebulous stars,
but especially about
four planets**

**flying around the star of Jupiter at unequal intervals
and periods with wonderful swiftness;
which, unknown by anyone until this day,
the first author detected recently
and decided to name
MEDICEAN STARS**

Ori.



Occ.

Stella occidentaliore maior, ambæ tamen valdè conspicuæ, ac splendide: vtra quæ distabat à Ioue scrupulis primis duobus; tertia quoque Stellula apparere cepit hora tertia prius minimè conspecta, quæ ex parte orientali Iouem ferè tangebatur, eratque admodum exigua. Omnes fuerunt in eadem recta, & secundum Eclipticæ longitudinem coordinatæ.

Die decimatertia primum à me quatuor conspectæ fuerunt Stellulæ in hac ad Iouem constitutione. Erant tres occidentales, & vna orientalis; lineam proximè

Ori.



Occ.

rectam constituebant; media enim occidentaliū paululum à recta Septentrionem versus deflectebat. Aberat orientaliore à Ioue minuta duo: reliquarum, & Iouis intercapedines erant singule vnius tantum minuti. Stellæ omnes eandem præ se ferebant magnitudinem; ac licet exiguam, lucidissimæ tamen erant, ac fixis eiusdem magnitudinis longe splendidiore.

Die decimaquarta nubilosa fuit tempestas.

Die decimaquinta, hora noctis tertia in proximè depicta fuerunt habitudine quatuor Stellæ ad Iouem;

Ori.



Occ.

occidentales omnes: ac in eadem proximè recta linea dispositæ; quæ enim tertia à Ioue numerabatur paululum

Iulum in boream attollebatur; propinquior Ioui erat omnium minima, reliquæ consequenter maiores apparebant; intervalla inter Iouem, & tria consequentia Sydera erant æqualia omnia, ac duorum minorum: at occidentalius aberat à sibi propinquo minutis quatuor. Erant lucida valde, & nihil scintillantia, qualia semper tum ante, tum post apparuerunt. Verum hora septima tres solummodo aderant Stellæ, in huius-

Ori.

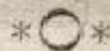


Occ.

cemodi cum Ioue aspectu; Erant nempe in eadem recta ad vnguem, viciniore Ioui, erat admodum exigua, & ab illo semota per minuta primatria; ab hac secunda distabat min: vno; tertia verò à secunda min: pri: 4. sec: 30. Post verò aliam horam duæ Stellulæ mediæ adhuc viciniore erant; aberant enim min: sc: vix 30. tantum.

Die decimasexta hora prima noctis tres vidimus Stellæ iuxta hunc ordinem dispositas. Duæ Iouem

Ori.

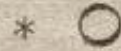


Occ.

intercipiebant ab eo per min: 9. sec: 40. hincinde remotæ, tertia verò occidentalis à Ioue distabat min: 8. Ioui proximæ non maiores, sed lucidiore apparebant remotiori.

Die decimasextima hora ab occasu 8. min: 30. huiusmodi fuit configuratio. Stella vna tantum orientalis à

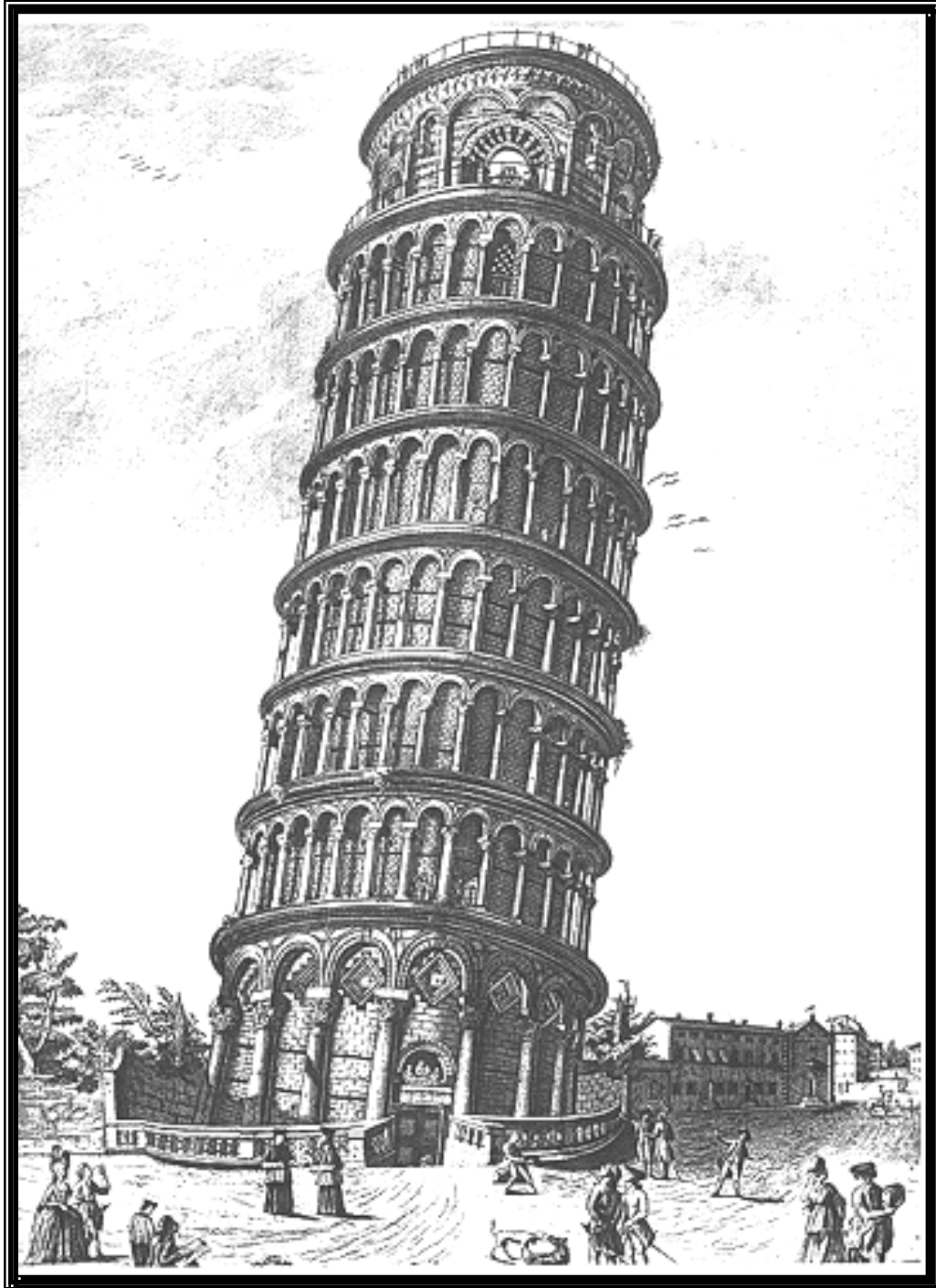
Ori.



Occ.

Ioue

**You cannot help it, Signor Sarsi [a pseudonym of Grassi] ,
that it was granted to me alone to discover all the new
phenomena in the sky and nothing to anybody else. This
is the truth which neither malice nor envy can suppress.**



DIALOGO

DI

GALILEO GALILEI LINCEO

MATEMATICO SOPRAORDINARIO

DELLO STUDIO DI PISA.

E Filosofo, e Matematico primario del

SERENISSIMO

GR.DVCA DI TOSCANA.

Doue ne i congressi di quattro giornate si discorre
sopra i due

MASSIMI SISTEMI DEL MONDO

TOLEMAICO, E COPERNICANO.

*Proponehdo indetèrminatamente le ragioni Filosofiche, et Naturali
tanto per l'una, quanto per l'altra parte.*

CON PRI



VILEGI.

IN FIRENZA, Per Gio:Batista Landini MDCXXXII.

CON LICENZA DE' SUPERIORI.

Imprimatur si videbatur Reuerendiss. P. Magistro Sacri
Palatij Apostolici.

A. Episcopus Bellicastensis Vicesgerens.

Imprimatur

Fr. Nicolaus Riccardius

Sacri Palatij Apostolici Magister.

Imprimatur Florentia ordinibus consuetis seruatis.

11. Septembris 1630.

Petrus Nicolinus Vic. Gener. Florentia.

Imprimatur die 11. Septembris 1630.

Fr. Clemens Egidius Inqu. Gener. Florentia.

Stampato il 12. di Settembre 1630.

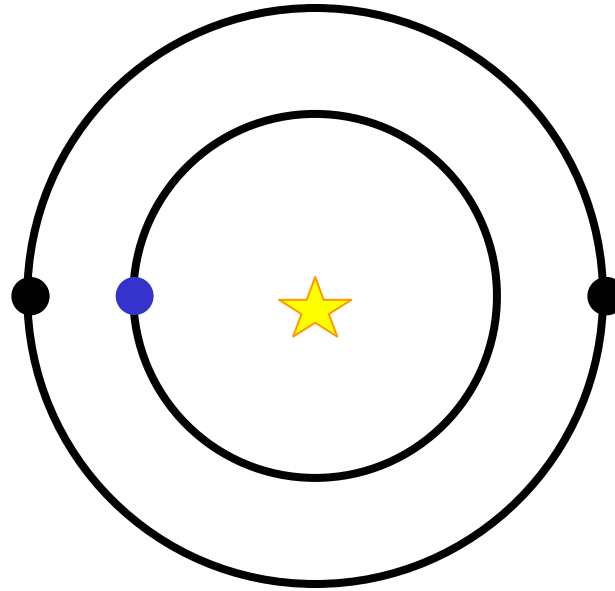
Niccolò dell'Altella.

Opposition and Conjunction

superior planet

opposition

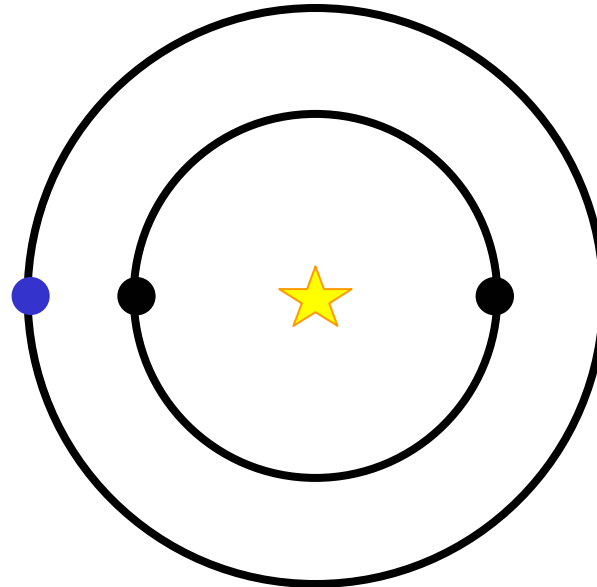
conjunction

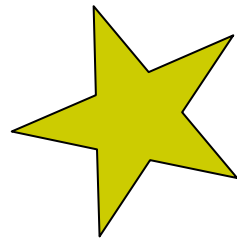
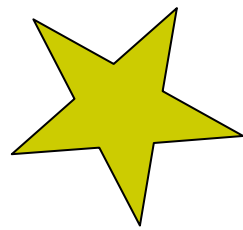


inferior planet

**inferior
conjunction**

**superior
conjunction**



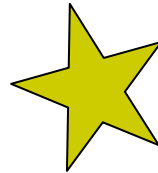


**Rocky Kolb-GnatSigh
Productions
Presents**

***The Dialogue Concerning the
Two Chief World Systems***



April 13, 2004



Salviati: Alissa Cambronne

Simplicio: Evelyn Rosas

Sagredo: Emily Boyd

I Fantasmi: Francesco Spanó e

Alberto Vallinotto



